REMARKS

Claims 1-21 are pending in this application. By this Amendment, Applicant AMENDS claim 1-18 and ADDS claims 20 and 21.

Applicant greatly appreciates the allowance of claims 1-8, 12-14, and 18 by the Examiner. Applicant assumes that the Examiner intended to also allow claims 19/1-8, 19/12-14, and 19/18 which depend upon allowed claims 1-8, 12-14, and 18.

The drawings were objected to for failing to designate Figs. 22-25 as –Prior Art--. Applicant has amended Figs. 22-25 in the accompanying Request for Approval of Proposed Drawing Corrections to properly be designated as --Prior Art--. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the objection to the drawings.

Claim 3 was objected to for containing minor informalities. Applicant has amended claim 3 to correct the minor informalities noted by the Examiner. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the objection to claim 3.

In addition, Applicant has amended claims 1, 2, 4-8, 12-14, and 18 to correct minor informalities.

Claims 9-11, 19/9, 19/10, and 19/11 were rejected under 35 U.S.C. §§ 102(b) and 102(e) as being anticipated by Bauer et al. (WO 00/25423 and U.S. 6,420,946).

Please note, Applicant assumes that the Examiner intended to reject claims 19/9, 19/10, and 19/11, NOT claim 19, because claim 19 depends upon claims 1-18 and the features of claims 1-8 and 12-18 were not discussed in the rejection.

Further, Applicant believes that the Examiner's rejection under 35 U.S.C. § 102(e) was improper. It is the Applicant's understanding that a reference filed under 35 U.S.C. §371 does not have a 35 U.S.C. §102(e) date when examining applications filed after November 29, 2000. MPEP § 706.02(a)(II)_(When Examining PG-PUB Applications) ("When examining a PG-PUB application, a U.S. patent granted on a 35 U.S.C. 371 application has no reference date under 35 U.S.C. 102(e)."). Accordingly,

Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 9-11, 19/9, 19/10, and 19/11 under 35 U.S.C. §102(e) as being anticipated by Bauer et al. (U.S. 6,420,946).

Claims 15-17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Bauer et al. in view of Nakazawa et al. (JP 11-097966).

Applicant respectfully traverses the rejections of claims 9-11, 15-17, 19/9, 19/10, and 19/11.

Claim 9 has been amended to recite:

> "A longitudinally connected resonator type surface acoustic wave filter, comprising:
> first, second and third IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave; wherein
> the first and third IDTs have an opposite phase to the phase of the second IDT;
> an unbalanced terminal extending from the second IDT and a balanced terminal extending from each of the first and third IDTs, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;
> each of the IDTs includes a narrow-pitch electrode finger portion wherein the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is made narrower than that of other electrode finger portions of the IDT; and
> **the distance between two adjacent electrode fingers of the second IDT is different on opposite sides of a middle point of the second IDT, at least at one location.**" (emphasis added)

Applicant's claim 9 recites the features of "the distance between two adjacent electrode fingers of the second IDT is different on opposite sides of a middle point of the second IDT, at least at one location." Applicant's claim 15 recites similar features as claim 9.

Applicant agrees with the Examiner that Bauer et al. teaches a surface acoustic wave device. However, Bauer et al. does not teach or suggest the features of "the distance between two adjacent electrode fingers of the second IDT is different on opposite sides of a middle point of the second IDT, at least at one location" as recited in

Applicant's claim 9. Bauer et al. teaches varying the period of adjacent electrode fingers in the vicinity of the interface between two **different** IDTs, **NOT** varying the distance between two adjacent electrode fingers on opposite sides of a middle point of the **same** IDT. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 9 under 35 U.S.C. §102(b) as being anticipated by Bauer et al.

The Examiner has relied upon Nakazawa et al. to allegedly cure various deficiencies of Bauer et al. in the rejection of claim 15. However, Nakazawa et al. clearly fails to teach or suggest the features of "the distance between two adjacent electrode fingers of the second IDT is different on opposite sides of a middle point of the second IDT, at least at one location" as recited in Applicant's claim 15. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 15 under 35 U.S.C. §103(a) as being unpatentable over Bauer et al. in view of Nakazawa et al.

Claim 10 has been amended to recite:

"A longitudinally connected resonator type surface acoustic wave filter, comprising:

first, second and third IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave; wherein

the first and third IDTs have an opposite phase to the phase of the second IDT;

an unbalanced terminal extending from the second IDT and a balanced terminal extending from each of the first and third IDTs, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

each of the IDTs includes a narrow-pitch electrode finger portion wherein the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is made narrower than that of other electrode finger portions of the IDT; and

the intercentral distance of two adjacent electrode fingers between adjacent IDTs are different between the opposite sides of the second IDT and **the intercentral distance of two adjacent electrode fingers between a narrow-pitch electrode finger portion and the electrode finger portion other than the narrow-pitch electrode finger portion**

are different between the opposite sides of the second IDT."
(emphasis added)

Applicant's claim 10 recites the features of "the intercentral distance of two adjacent electrode fingers between a narrow-pitch electrode finger portion and the electrode finger portion other than the narrow-pitch electrode finger portion are different between the opposite sides of the second IDT." Applicant's claim 16 recites similar features as claim 10.

Applicant agrees with the Examiner that Bauer et al. teaches a surface acoustic wave device. However, Bauer et al. does not teach or suggest the features of "the distance between two adjacent electrode fingers of the second IDT is different between opposite sides of a middle point of the second IDT, at least at one location" as recited in Applicant's claim 10. Bauer et al. teaches varying the period of adjacent electrode fingers in the vicinity of the interface between two **different** IDTs, **NOT** varying the intercentral distance of two adjacent electrode fingers between a narrow-pitch electrode finger portion and the electrode finger portion other than the narrow-pitch electrode finger portion of the **same** IDT. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 10 under 35 U.S.C. §102(b) as being anticipated by Bauer et al.

The Examiner has relied upon Nakazawa et al. to allegedly cure various deficiencies of Bauer et al. in the rejection of claim 16. However, Nakazawa et al. clearly fails to teach or suggest the features of "the distance between two adjacent electrode fingers of the second IDT is different between opposite sides of a middle point of the second IDT, at least at one location" as recited in Applicant's claim 16. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 16 under 35 U.S.C. §103(a) as being unpatentable over Bauer et al. in view of Nakazawa et al.

Claim 11 has been amended to recite:

"A longitudinally connected resonator type surface acoustic wave filter, comprising:

first, second and third IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave; wherein

the first and third IDTs have an opposite phase to the phase of the second IDT;

an unbalanced terminal extending from the second IDT and a balanced terminal extending from each of the first and third IDTs, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

each of the IDTs includes a narrow-pitch electrode finger portion wherein the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is made narrower than that of other electrode finger portions of the IDT; and

said longitudinally connected resonator type surface acoustic wave filter further **including at least two of the following features (a) to (d)**:

(a) the duty of the electrode fingers in said narrow-pitch electrode finger portion is different between the portion where the first and second IDTs are adjacent to each other, and the portion where the second and third IDTs are adjacent to each other;

(b) the pitch of electrode fingers in said narrow-pitch electrode finger portion is different between the portion where the first and second IDTs are adjacent to each other, and the portion where the second and third IDTs are adjacent to each other;

(c) the distance between two adjacent electrode fingers of the second IDT is different on opposite sides of a middle point of the second IDT, at least at one location; and

(d) the intercentral distance of two adjacent electrode fingers between adjacent IDTs are different between the opposite sides of the second IDT and/or the intercentral distance of two adjacent electrode fingers between the narrow-pitch electrode finger portion and the electrode finger portion other than the narrow-pitch electrode finger portion are different between the opposite sides of the second IDT." (emphasis added)

Applicant's claim 11 recites the features of "including at least two of the following features (a) to (d)." Applicant's claim 17 recites similar features as claim 11.

The Examiner has alleged that Bauer et al. teaches features (c) and (d). However, as noted above in the discussion of claim 9, Bauer et al. clearly fails to teach or suggest feature (c) of "the distance between two adjacent electrode fingers of the second IDT is different between opposite sides of a middle point of the second IDT, at

least at one location" as recited in Applicant's claim 11. At best, Bauer et al. teaches a surface acoustic wave filter with **one** of the features (a) to (d), **NOT** a surface acoustic wave filter with **two** of the features (a) to (d) as recited in Applicant's claim 11. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 11 under 35 U.S.C. §102(b) as being anticipated by Bauer et al.

The Examiner has relied upon Nakazawa et al. to allegedly cure various deficiencies of Bauer et al. in the rejection of claim 17. However, Nakazawa et al. clearly fails to teach or suggest a surface acoustic wave device with two of the features (a) to (d). Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 17 under 35 U.S.C. §103(a) as being unpatentable over Bauer et al. in view of Nakazawa et al.

Accordingly, Applicant respectfully submits that Bauer et al. and Nakazawa et al., applied alone or in combination, fail to teach or suggest the unique combination and arrangement of elements recited in claims 9-11 and 15-17 of the present application.

In view of the foregoing amendments and remarks, Applicant respectfully submits that this application is in condition for allowance. Favorable consideration and prompt allowance are solicited.

To the extent necessary, Applicant petitions the Commissioner for a ONE-month extension of time, extending to February 21, 2003, the period for response to the Office Action dated October 21, 2002.

The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1353.

Respectfully submitted,

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VERSION WITH MARKINGS SHOWING CHANGES MADE

1. (amended) A longitudinally connected resonator type surface acoustic wave filter, comprising:

first and second longitudinally connected resonator type surface acoustic wave filters each having a plurality of IDTs which are successively arranged on a piezoelectric substrate along a propagation direction of a surface acoustic wave~~,~~; wherein~~:~~

said first longitudinally connected resonator type surface acoustic wave filter has a transmission phase that is substantially opposite to a transmission phase of said second longitudinally connected resonator type surface acoustic wave filter;

first terminals of said first and second longitudinally connected resonator type surface acoustic wave filters each defining unbalanced terminals by being connected in parallel with each other, and second terminals of said first and second longitudinally connected resonator type surface acoustic wave filters defining balanced terminals by being connected via a ground or connected in series with each other, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

wherein in said first and second longitudinally connected resonator type surface acoustic wave filters, each of said plurality of IDTs includes a narrow-pitch electrode finger portion, and the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT, is narrower than that of other electrode finger portions of the IDT; and

the duty of the electrode fingers in said narrow-pitch electrode finger portion is different between said first and second longitudinally connected resonator type surface acoustic wave filters.

2. (amended) A longitudinally connected resonator type surface acoustic wave filter, comprising:

first and second longitudinally connected resonator type surface acoustic wave filters each having a plurality of IDTs successively arranged on a piezoelectric substrate along a propagation direction of a surface acoustic wave~~,~~; wherein~~:~~

said first longitudinally connected resonator type surface acoustic wave filter has a transmission phase that is substantially opposite to a transmission phase of said second longitudinally connected resonator type surface acoustic wave filter;

first terminals of said first and second longitudinally connected resonator type surface acoustic wave filters each arranged to define unbalanced terminals by being connected in parallel with each other, and second terminals of said first and second longitudinally connected resonator type surface acoustic wave filters are arranged to define balanced terminals by being connected via a ground or by being connected in series with each other, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

wherein in said first and second longitudinally connected resonator type surface acoustic wave filters, each of said plurality of IDTs includes a narrow-pitch electrode finger portion, and the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is narrower than that of other electrode finger portions of the IDT; and

the pitch of the electrode fingers in said narrow-pitch electrode finger portion is different between said first and second longitudinally connected resonator type surface acoustic wave filters.

3. (amended) A longitudinally connected resonator type surface acoustic wave filter, comprising:

first and second longitudinally connected resonator type surface acoustic wave filters each having a plurality of IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave~~,~~; wherein~~:~~

said first longitudinally connected resonator type surface acoustic wave filter has a transmission phase that is substantially opposite to a transmission phase of said second longitudinally connected resonator type surface acoustic wave filter;

first terminals of said first and second longitudinally connected resonator type surface acoustic wave filters each being arranged to define unbalanced terminals by being connected in parallel with each other, and second terminals of said first and second longitudinally connected resonator type surface acoustic wave filters each being arranged to define balanced terminals by being connected via a ground or by being connected in series with each other, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

wherein in said first and second longitudinally connected resonator type surface acoustic wave filters, each of said plurality of IDTs including a narrow-pitch electrode finger portion, and the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is narrower than that of other electrode finger portions of the IDT; and

the intercentral distance of two adjacent electrode fingers is different between said first and second longitudinally connected resonator type surface acoustic wave filters, at ~~at~~ least at one location.

4. (amended) A longitudinally connected resonator type surface acoustic wave filter, comprising:

first and second longitudinally connected resonator type surface acoustic wave filters each having a plurality of IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave~~,~~; wherein~~:~~

said first longitudinally connected resonator type surface acoustic wave filter has a transmission phase that is substantially opposite to a transmission phase of said second longitudinally connected resonator type surface acoustic wave filter;

first terminals of said first and second longitudinally connected resonator type surface acoustic wave filters each is arranged to define unbalanced terminals by being connected in parallel with each other, and second terminals of said first and second longitudinally connected resonator type surface acoustic wave filters each defining balanced terminals by being connected via a ground or by being connected in series with each other, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

wherein in said first and second longitudinally connected resonator type surface acoustic wave filters, each of said plurality of IDTs including a narrow-pitch electrode finger portion, and the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is narrower than that of other electrode finger portions of the IDT; and

at least one of the intercentral distance of the two adjacent electrode fingers between adjacent IDTs and the intercentral distance of the two adjacent electrode fingers between the narrow-pitch electrode finger portion and the remaining electrode finger portion, is different between said first and second longitudinally connected resonator type surface acoustic wave filters.

5. (amended) A longitudinally connected resonator type surface acoustic wave filter, comprising:

first and second longitudinally connected resonator type surface acoustic wave filters each having a plurality of IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave~~,~~; wherein~~:~~

said first longitudinally connected resonator type surface acoustic wave filter has a transmission phase that is substantially opposite to a transmission phase of said second longitudinally connected resonator type surface acoustic wave filter;

first terminals of said first and second longitudinally connected resonator type surface acoustic wave filters each defining unbalanced terminals by being connected in

parallel with each other, and second terminals of said first and second longitudinally connected resonator type surface acoustic wave filters each defining balanced terminals by being connected via a ground or in series with each other, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

wherein in said first and second longitudinally connected resonator type surface acoustic wave filters, each of said plurality of IDTs including a narrow-pitch electrode finger portion, and the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is narrower than that of other electrode finger portions of the IDT; and

said longitudinally connected resonator type surface acoustic wave filter further including at least two of the following features (a) to (d):

(a) the duty of the electrode fingers in said narrow-pitch electrode finger portion is different between said first and second longitudinally connected resonator type surface acoustic wave filters;

(b) the pitch of the electrode fingers in said narrow-pitch electrode finger portion is different between said first and second longitudinally connected resonator type surface acoustic wave filters;

(c) the intercentral distance of two adjacent electrode fingers is different between said first and second longitudinally connected resonator type surface acoustic wave filters, at at least at one location; and

(d) at least one of the intercentral distance of the two adjacent electrode fingers between adjacent IDTs and the intercentral distance of the two adjacent electrode fingers between a narrow-pitch electrode finger portion and the remaining electrode finger portion, is different between said first and second longitudinally connected resonator type surface acoustic wave filters.

6. (amended) A longitudinally connected resonator type surface acoustic wave filter, comprising:

first and second longitudinally connected resonator type surface acoustic wave filters each having a plurality of IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave~~,~~; wherein~~:~~

said first longitudinally connected resonator type surface acoustic wave filter has a transmission phase that is substantially opposite to a transmission phase of said second longitudinally connected resonator type surface acoustic wave filter;

first terminals of said first and second longitudinally connected resonator type surface acoustic wave filters each defining unbalanced terminals by being connected in parallel with each other, and second terminals of said first and second longitudinally connected resonator type surface acoustic wave filters each defining balanced terminals by being connected via a ground or by being connected in series with each other, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

each of said first and second longitudinally connected resonator type surface acoustic wave filters has, in each of the plural IDTs thereof, a chirp type electrode finger portion, wherein the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is linearly changed along the propagation direction of a surface acoustic wave; and

the configuration of said chirp type electrode finger portion is different between said first and second longitudinally connected resonator type surface acoustic wave filters.

7. (amended) A longitudinally connected resonator type surface acoustic wave filter, comprising:

first, second and third IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave~~,~~; wherein~~:~~

the first and third IDTs have an opposite phase to the phase of the second IDT;

an unbalanced terminal extending from the second IDT and a balanced terminal extending from each of the first and third IDTs, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

each of the IDTs includes a narrow-pitch electrode finger portion wherein the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is made narrower than that of other electrode finger portions of the IDT; and

the duty of the electrode fingers in said narrow-pitch electrode finger portion is different between a portion where the first and second IDTs are adjacent to each other, and a portion where the second and third IDTs are adjacent to each other.

8. (amended) A longitudinally connected resonator type surface acoustic wave filter, comprising:

first, second and third IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave; wherein:

the first and third IDTs have an opposite phase to the phase of the second IDT;

an unbalanced terminal extending from the second IDT and a balanced terminal extending from each of the first and third IDTs, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

each of the IDTs includes a narrow-pitch electrode finger portion wherein the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is made narrower than that of other electrode finger portions of the IDT; and

the pitch of the electrode fingers in said narrow-pitch electrode finger portion is different between a portion where the first and second IDTs are adjacent to each other, and a portion where the second and third IDTs are adjacent to each other.

9. (amended) A longitudinally connected resonator type surface acoustic wave filter, comprising:

first, second and third IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave~~,~~; wherein~~:~~

the first and third IDTs have an opposite phase to the phase of the second IDT~~,~~;

an unbalanced terminal extending from the second IDT~~,~~ and a balanced terminal extending from each of the first and third IDTs, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

each of the IDTs includes a narrow-pitch electrode finger portion wherein the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is made narrower than that of other electrode finger portions of the IDT; and

~~denoting a middle point of said second IDT as a center,~~ the distance between two adjacent electrode fingers of the second IDT is different ~~between~~ on opposite sides of ~~said center~~a middle point of the second IDT, at least at one location.

10. (amended) A longitudinally connected resonator type surface acoustic wave filter, comprising:

first, second and third IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave~~,~~; wherein~~:~~

the first and third IDTs have an opposite phase to the phase of the second IDT~~,~~;

an unbalanced terminal extending from the second IDT~~,~~ and a balanced terminal extending from each of the first and third IDTs, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

each of the IDTs includes a narrow-pitch electrode finger portion wherein the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is made narrower than that of other electrode finger portions of the IDT; and

the intercentral distances of two adjacent electrode fingers between adjacent IDTs~~,~~ are different between the opposite sides of the second IDT and/~~or~~ the intercentral distance of two adjacent electrode fingers between a narrow-pitch electrode finger portion and the electrode finger portion other than the narrow-pitch electrode finger portion~~,~~ are different between the opposite sides of the second IDT.

11. (amended) A longitudinally connected resonator type surface acoustic wave filter, comprising:

first, second and third IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave~~,~~; wherein:

the first and third IDTs have an opposite phase to the phase of the second IDT~~,~~;

an unbalanced terminal extending from the second IDT~~,~~ and a balanced terminal extending from each of the first and third IDTs, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

each of the IDTs includes a narrow-pitch electrode finger portion wherein the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is made narrower than that of other electrode finger portions of the IDT; and

said longitudinally connected resonator type surface acoustic wave filter further including at least two of the following features (a) to (d):

(a) the duty of the electrode fingers in said narrow-pitch electrode finger portion is different between the portion where the first and second IDTs are adjacent to each other, and the portion where the second and third IDTs are adjacent to each other;

(b) the pitch of electrode fingers in said narrow-pitch electrode finger portion is different between the portion where the first and second IDTs are adjacent to each other, and the portion where the second and third IDTs are adjacent to each other;

(c) ~~denoting the middle point of said second IDT as a center,~~ the distance between two adjacent electrode fingers of the second IDT is different ~~between~~ on

opposite sides of ~~said centera~~ middle point of the second IDT, at least at one location; and

(d) the intercentral distances of two adjacent electrode fingers between adjacent IDTs, are different between the opposite sides of the second IDT and/or the intercentral distance of two adjacent electrode fingers between the narrow-pitch electrode finger portion and the electrode finger portion other than the narrow-pitch electrode finger portion, are different between the opposite sides of the second IDT.

12. (amended) A longitudinally connected resonator type surface acoustic wave filter, comprising:

first, second and third IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave, wherein:

the first and third IDTs have an opposite phase to the phase of the second IDT;

an unbalanced terminal extending from the second IDT, and a balanced terminal extending from each of the first and third IDTs, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

each of said IDTs includes a chirp type electrode finger portion wherein the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is linearly changed along the propagation direction of a surface acoustic wave; and

the configuration of said chirp type electrode finger portion is different between a portion where the first and second IDTs are adjacent to each other, and a portion where the second and third IDTs are adjacent to each other.

13. (amended) A longitudinally connected resonator type surface acoustic wave filter, comprising:

first, second and third IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave, wherein:

the second IDT is divided into two portions, the first and third IDTs having an opposite phase to the phase of the second IDT, an unbalanced terminal extending from each of the first and third IDTs, and a pair of balanced terminals extending from the second IDT which has been divided into two portions, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

each of the IDTs includes a narrow-pitch electrode finger portion wherein the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is narrower than the pitch of the other electrode finger portion of the IDT; and

the duty of the electrode fingers in said narrow-pitch electrode finger portion is different between a portion where the first and second IDTs are adjacent to each other, and a portion where the second and third IDTs are adjacent to each other.

14. (amended) A longitudinally connected resonator type surface acoustic wave filter, comprising:

first, second and third IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave~~,~~; wherein:

the second IDT is divided into two portions, the first and third IDTs having an opposite phase to the phase of the second IDT, an unbalanced terminal extending from each of the first and third IDTs, and a pair of balanced terminals extending from the second IDT which is divided into the two portions, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

each of the IDTs includes a narrow-pitch electrode finger portion wherein the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is narrower than the pitch of the other electrode finger portion of the IDT; and

the pitch of the electrode fingers in said narrow-pitch electrode finger portion is different between a portion where the first and second IDTs are adjacent to each other, and a portion where the second and third IDTs are adjacent to each other.

15. (amended) A longitudinally connected resonator type surface acoustic wave filter, comprising:

first, second and third IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave~~,~~; wherein~~:~~

the second IDT is divided into two portions, the first and third IDTs having an opposite phase to the phase of the second IDT, an unbalanced terminal extending from each of the first and third IDTs, and a pair of balanced terminals extending from the second IDT which is divided into the two portions, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

each of the IDTs includes a narrow-pitch electrode finger portion wherein the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is narrower than the pitch of the other electrode finger portion of the IDT; and

~~denoting a middle point of said second IDT as a center,~~ the distance between two adjacent electrode fingers of the second IDT is different ~~between~~ on opposite sides of ~~said center~~a middle point of the second IDT, at least at one location.

16. (amended) A longitudinally connected resonator type surface acoustic wave filter, comprising:

first, second and third IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave~~,~~; wherein~~:~~

the second IDT is divided into two portions, the first and third IDTs having an opposite phase to the phase of the second IDT, an unbalanced terminal extending from each of the first and third IDTs, and a pair of balanced terminals extending from the

second IDT which is divided into the two portions, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

each of the IDTs includes a narrow-pitch electrode finger portion wherein the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is narrower than the pitch of the other electrode finger portion of the IDT; and

the intercentral distances of the two adjacent electrode fingers between adjacent IDTs, are different between opposite sides of the second IDT and/~~or~~ the intercentral distance of the two adjacent electrode fingers between the narrow-pitch electrode finger portion and the electrode finger portion other than the narrow-pitch electrode finger portion, are different between opposite sides of the second IDT.

17. (amended) A longitudinally connected resonator type surface acoustic wave filter, comprising:

first, second and third IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave~~,~~; wherein:

the second IDT is divided into two portions, the first and third IDTs having an opposite phase to the phase of the second IDT, an unbalanced terminal extending from each of the first and third IDTs, and a pair of balanced terminals extending from the second IDT which is divided into the two portions, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

each of the IDTs includes a narrow-pitch electrode finger portion wherein the pitch of one electrode finger portion from the adjacent IDT-side end of said each IDT is narrower than the pitch of the other electrode finger portion of the IDT; and

said longitudinally connected resonator type surface acoustic wave filter further comprising at least two of the following features (a) to (d):

(a) the duty of the electrode fingers in said narrow-pitch electrode finger portion is different between a portion where the first and second IDTs are adjacent to each other, and a portion where the second and third IDTs are adjacent to each other;

(b) the pitch of the electrode fingers in said narrow-pitch electrode finger portion is different between the portion where the first and second IDTs are adjacent to each other, and the portion where the second and third IDTs are adjacent to each other;

(c) ~~denoting a middle point of said second IDT as a center,~~ the distance between two adjacent electrode fingers of the second IDT is different ~~between~~ on opposite sides of ~~said centera~~ middle point of the second IDT, at least at one location; and

(d) at least one of the intercentral distance of the two adjacent electrode fingers between adjacent IDTs and the intercentral distance of the two adjacent electrode fingers between the narrow-pitch electrode finger portion and the electrode finger portion other than the narrow-pitch electrode finger portion~~,~~ is different between the opposite sides of the second IDT.

18. (amended) A longitudinally connected resonator type surface acoustic wave filter, comprising:

first, second and third IDTs successively arranged on a piezoelectric substrate along the propagation direction of a surface acoustic wave~~,~~; wherein~~:~~

the second IDT is divided into two portions, the first and third IDTs having an opposite phase to the phase of the second IDT, an unbalanced terminal extending from each of the first and third IDTs, and a pair of balanced terminals extending from the second IDT which is divided into the two portions, whereby said longitudinally connected resonator type surface acoustic wave filter has a balanced-unbalanced conversion function;

each of said IDTs includes a chirp type electrode finger portion wherein the pitch of one electrode finger portion from an adjacent IDT-side end of said each IDT is linearly changed along the propagation direction of a surface acoustic wave; and

the configuration of said chirp type electrode finger portion is different between a portion where the first and second IDTs are adjacent to each other, and a portion where the second and third IDTs are adjacent to each other.